

Integrating Sound Level Meters

LA-5570/5560/2560



ONO SOKKI

High-functionality Integrating Sound Level Meters

Type I Sound
Level Meters

High sensitivity

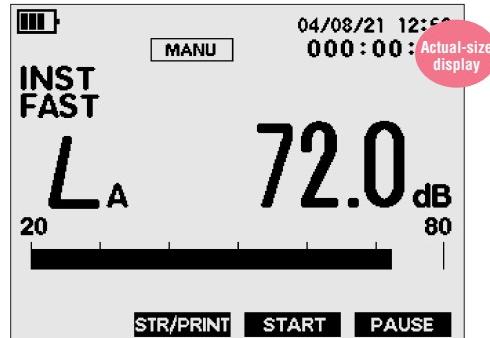
Wide band

LA-5570/5560

The LA-5570/5560/2560 high-functionality sound level meters conform to various international sound level meter standards such as the JIS, IEC and CE-marking standards, and are designed to be easily connected to a PC. An SD memory card and a USB connector are provided as standard to meet the growing requirements for computer processing of measurement data captured to the LA series sound level meters. Data can be easily read just by connecting the sound level meter to a Windows-based PC, without any special software required.

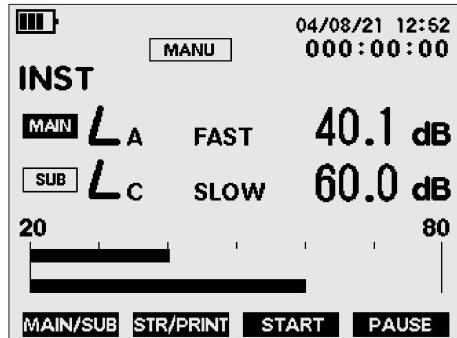
Large, Easy-to-read Display

The large 2.8" LCD (320 x 240 dots) used for the display screen provides improved legibility of the on-screen information. Calculation values such as Leq and L_N and the setting menu parameters can be clearly and effortlessly read.



Simultaneous Measurement of Six Conditions

The LA-5570/5560/2560 sound level meters are capable of simultaneous measurement at the FAST, SLOW, and IMPULSE time weights with respect to the weight of the two frequency weights that were selected. Three different frequency weights can be selected:



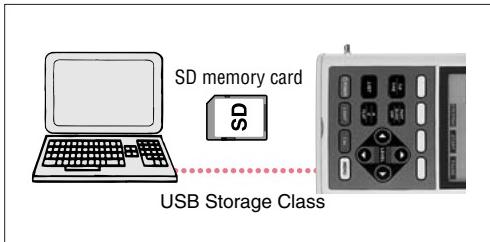
A-weighting, C-weighting, and flat response-weighting. Measurement can now be performed without having to worry about forgetting to capture some of the data.



Standard accessories

- AC adapter
- Signal cable: AX-501
- Windscreen
- Hand strap
- Batteries
- Carrying case
- SD memory card (32 MB)
- User's manual

Simple and Easy Data Processing



All the measurement results are stored on the SD memory card. To transfer the data to a PC, either use a USB cable to connect the sound level meter to a Windows-based PC, or insert the SD card directly into the computer's card slot. Special software to enable the Windows-based PC to read the data on the SD card is not required in either case. If required, spreadsheet or other similar software can be freely used to process the measured data.

Mobile Phone-like Easy Operability



The menus used for making the settings to perform measurement are easy-to-read and intuitive, enabling operation similar to that of using a mobile phone. Moreover, for enhanced operability, the parameters that are most frequently used have been assigned to the direct keys on the front panel of the sound level meter.

Remote Operation Also Enabled



The RS-232C transmission function enables a PC to be used for remote operation of the sound level meter, and for data transfer.

Optional Functions

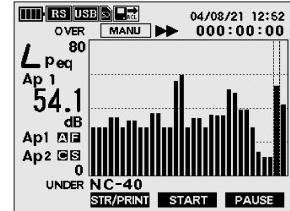
LA-0551/0552 Real-time Octave Analysis Functions

Real-time octave analysis functions can be added to the sound level meter. Adding one of these options expands the analysis range up to the 20-kHz band, and enables coverage of the entire audible range.

Applicable standards :JIS C1514 Class 1
IEC 61260 Class 1

Analysis bands :31.5 Hz to 16 kHz
10 bands (1/1 octave)
20 Hz to 20 kHz
31 bands (1/3 octave)

Calculated parameters :Simultaneous measurement of
 $L_{eq}/L_e/L_{MAX}/L_{MIN}/L_p$



A 1/1 octave band filter function and an NC value calculation function are included in the LA-0551's real-time octave analysis functions.

A 1/3 octave band filter function and a loudness value calculation function^{*1} are included in the LA-0552's 1/3 real-time octave analysis functions.

**1: The loudness value calculation function is included in the LA-5560/5570 models only.*

LA-0553 Spectral Monitor Function

This is the first time that Ono Sokki has used its FFT technology, which has earned the company a reputation for reliability over the years, in an option for a sound level meter.

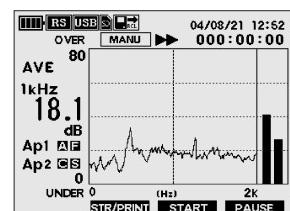
Number of analysis lines: 400

X-axis expansion function: x1, x2, x4

Frequency ranges: 1 kHz/2 kHz/5 kHz/12.5 kHz/25 kHz

Calculated parameters: Instantaneous values, power average

List display function: The 20 highest peak values



LA-0554 Sound Recording Function

Use this option when you want to save sound data directly to a sound level meter.

Recording file format: WAV file format; sampling rate: 64 kHz

A/D resolution: 16-bit

Data is captured to the SD memory card inserted in the sound level meter.*2

**2: A high-speed SD card (with a data transfer speed of at least 10 MB/s) is required when using the LA-0554 option to record sound data directly. The high-speed SD card is sold separately.*

LA-0555 Advanced Comparator Function

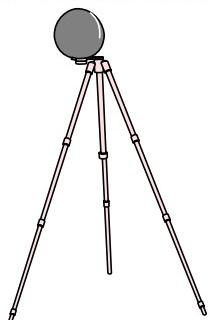
This option enables a comparator level to be set in advance to provide a basis for comparison with the input sound pressure level. The compared results are output using the COMP OUT no-contact output terminal on the bottom surface of the sound level meter.

Delay time: Within 0.1 s

Output hold time: Can be set to 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, or 60 s. Moreover, if the sound level meter is fitted with the LA-0551/0552 option, the comparator function can also be used as an octave band comparator.

Options and Peripheral Devices

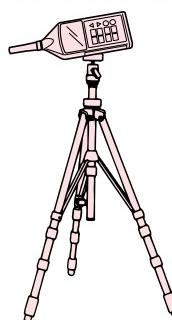
LA-0206 All-weather Windscreen



Using the all-weather type windscreen reduces noise caused by the wind when performing sound level measurements outdoors, and prevents the microphone from being damaged by rain or snow.

Note: The tripod is not included.

LA-0203A Sound Level Meter Tripod



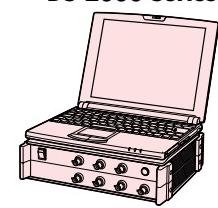
This tripod is Ono Sokki's standard tripod for use with the company's sound level meters. The maximum height is 163 cm, and the minimum height can be reduced to less than 10 cm by reversing the tripod and attaching the center pole to the sound level meter.

CF-3600/DS-2000

Signal Analyzing Systems



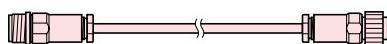
Multi-channel Data Station
DS-2000 Series



Using the CF-3600 FFT Analyzer and the DS-2000 Series Data Station for frequency analysis and octave analysis enables even more advanced measurement whereby the cause and appropriate countermeasure can be determined simply from the measurement of the sound level.

AG-3300 series

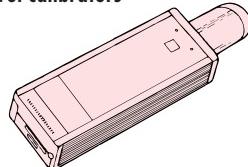
Extension Cable



For LA-5570/5560/2560/1200 series.

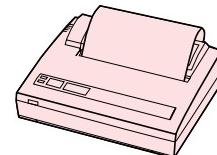
AG-3300 series include AG-3301(5 m), AG-3302 (10 m), AG-3303(20 m), and AG-3304(30 m).

SC-2120/3100
Sound level calibrators



A sound level calibrator is indispensable for determining the reference measurement value for a sound level meter. The SC-2120 model is a speaker type used for 1 kHz, 94 dB output (JIS C 1515 Class 2), while the SC-3100 model is a Piston phone type used for 250 Hz, 124 dB output (JIS C 1515 Class 1L).

DPU-414 (connection cable supplied)
Printer for Use with Sound Level Meters



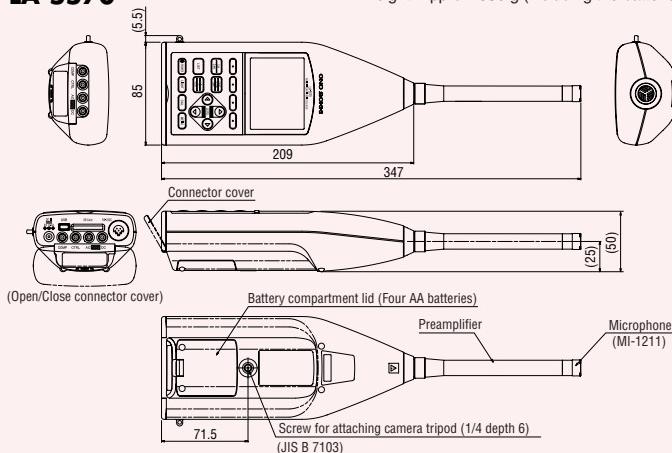
The DPU-414 is a printer for use with sound level meters (excluding the LA-1210 model). Connecting the printer to a sound level meter enables manual printing, auto printing, and memory printing. (The AC adapter is sold separately).

- AC adapter PW-4007J or 4007E
- Recording paper CX-050B (30-m roll, 10 rolls/box)

External drawings

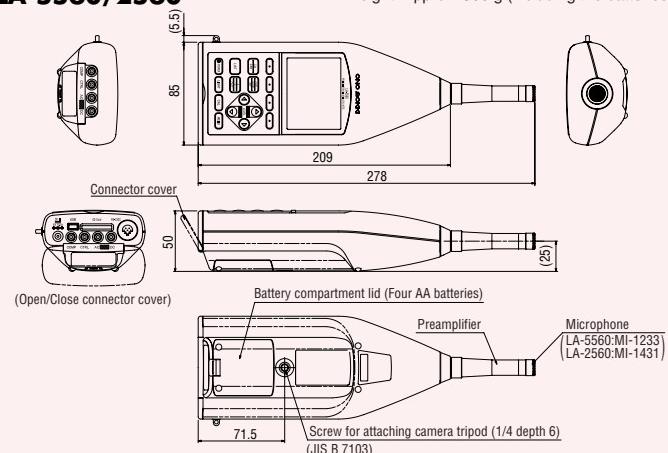
LA-5570

Weight: Approx. 550 g (including the batteries)



LA-5560/2560

Weight: Approx. 500 g (including the batteries)



Basic Specifications

	LA-5570	LA-5560	LA-2560
Applicable standards	JIS C 1505:1988 IEC60651:1979 Type1 IEC60804:2000 Type1 IEC61672-1:2002 Class1	JIS C 1502:1990 IEC60651:1979 Type2 IEC60804:2000 Type2 IEC61672-1:2002 Class2	
Measurement range (IEC)	19 to 127 dB (A) 25 to 127 dB (C) 33 to 127 dB (FLAT)	25 to 137 dB (A) 29 to 137 dB (C) 35 to 137 dB (FLAT)	25 to 130 dB (A) 29 to 130 dB (C) 35 to 130 dB (FLAT)
Measurement range (JIS)	22 to 120 dB (A) 28 to 120 dB (C) 36 to 120 dB (FLAT)	28 to 130 dB (A) 32 to 130 dB (C) 38 to 130 dB (FLAT)	26 to 130 dB (A) 30 to 130 dB (C) 36 to 130 dB (FLAT)
Frequency range	20 Hz to 12.5 kHz	20 Hz to 20.0 kHz	20 Hz to 8.0 kHz
Microphone	MI-1211 1/2-inch bias	MI-1233 1/2-inch electret condenser	MI-1431 1/2-inch electret condenser
Level range	10-dB step x 6 levels/wide range x 2 levels		
Linearity range	Normal range: 75 dB/wide range: 100 dB		
Time weighting	FAST (125 ms), SLOW (1 s), IMPULSE (Rising 35 ms, Falling 1.5 s)		
Frequency weighting	A, C, FLAT		
Measurement parameters	L _p , TACTMAX, L _{eq} , L _E , PEAK, MAX, MIN, L _N (L _{HI} , L ₅ , L ₁₀ , L ₅₀ , L ₉₀ , L ₉₅ , L _{LO} , L _{AV} , Arbitrary L _N data [2])		
Measurement time	User-specified (HH:MM:SS.S) from 0.1 s to 24 hr in 0.1-s increments		
Dual mode function	Provided as standard (simultaneous measurement of two frequency weightings x 3 time weighting conditions for each).		
Sampling interval	15.6 µs (L _{eq} , L _{AE} , PEAK, MAX, MIN) 100 ms (L _N)		
Display unit	Backlight 2.8" LCD (320 x 240 dots)		
Digital display	4-digits/0.1 dB resolution/updated every 1s		
Bar display	Standard: Display range 60 dB/Resolution 0.1 dB/updated every 0.1 s Wide range: Display range 90 dB/Resolution 1.0 dB/updated every 0.1 s		
Low battery indication	The battery voltage (4 to 6V) is indicated by an 8-segment display (flashes when the battery is low).		
Memory functions	OFF, AUTO (6 types), MAN, RECORD		
Panel conditions memory	Power-off memory		
Clock function	Built-in (Year/month/day/hour/second)		
Backup functions	The battery backup function backs up the internal clock for approximately 20 days (the internal battery is automatically charged by the batteries or the AC adapter when the power is on).		
Calibration signal	Built-in transmitter for electronic calibration (1 kHz sine wave) Normal range: -6dB full scale (wide range: -16 dB full scale)		
AC output	Full scale: 0.707 Vrms (normal range)/2.236 Vrms (wide range)/Load resistance 10kΩ or higher Linearity range: 80 dB (normal range)/90 dB (wide range)		
DC output	Full scale: 2.5 V Scale factor: 0.5 V/10 dB (normal range)/0.25 V/10 dB (wide range)/Load resistance 10kΩ or higher		
RS-232C interface	Provided as standard, transmission speeds: 9600, 115200 bps		
USB interface	Provided as standard, compliant with USB Mass Storage Class specification Ver. 1.1		
Extendable cable length*1	100 m		
Power supply	Four AA batteries or AC adapter		
Battery life (continuous use)	Approx. 8 hours (alkaline batteries)		
Operating (storage) temperature range	-10 to +50°C (-20 to +60°C)		
Operating (storage) humidity range	30 to 90%RH (10 to 90%RH)		
Outer dimensions	85(W) x 347(H) x 50(D) mm	85(W) x 279(H) x 50(D) mm	
Weight (including the batteries)	Approx. 550 g	Approx. 500 g	
Accessories	AC adapter, signal cable:AX-501, windscreens, hand strap, batteries, carrying case, SD memory card (32 MB), user's manual		

*1: The cable length given here is the length of each of the special cables sold by Ono Sokki.

Sound Level Meter Functions Chart

	Linearity range 85 dB			Linearity range 100 dB							
	PC connection, printer connection (with transmission functions)										
	With memory (manual memory)										
	Continuous measurement (block memory or auto memory)						Wide band (to 20 kHz)	High sensitivity (from 22 dB [A])			
Type II	LA-1210	LA-1220	LA-1240	LA-1250	LA-2560	—	—	—			
Extendable cable with BNC connector	—	—	—	LA-1350	—	—	—	—			
Type I	—	—	—	—	—	LA-5560	LA-5570	—			
Extendable cable by with BNC connector, wide band	—	—	—	LA-4350	—	—	—	—			
General measurement (Instantaneous values, maximum (max) values)	●	●	●	●	●	●	●	●			
Variable noise, Equivalent sound level (Leq), percentile level (Lx), sound exposure level (L _E)	—	—	●	●	●	●	●	●			
Workplace environments (Leq measurement for a duration of 10 minutes)	—	—	●	●	●	●	●	●			
Road traffic noise and environmental noise (continuous Leq measurement over a 24-hour period)	—	—	—	●	—	—	—	—			
Noise from passing trains (with comparator and external control)	—	—	○	○	○	○	○	○			
Factory noise	—	—	●	●	●	●	●	●			
RS-232C connection	—	●	●	●	●	●	●	●			
Multiple frequency weighting settings	—	—	—	—	●	●	●	●			
Multiple time weighting	—	—	—	—	●	●	●	●			
USB storage	—	—	—	—	●	●	●	●			
Data saved to SD card	—	—	—	—	●	●	●	●			
Level judgment (comparator output)	—	○	○	○	○	○	○	○			
External control	—	—	○	○	●	●	●	●			
1/1, 1/3 real-time octave analysis	—	—	—	—	○	○	○	○			
1/1, 1/3 octave band filter *1	—	—	—	—	○	○	○	○			
1/1, 1/3 octave band comparator *2	—	—	—	—	○	○	○	○			
Sound recording	—	—	—	—	○	○	○	○			
Spectral monitor	—	—	—	—	○	○	○	○			
Loudness value calculation *3	—	—	—	—	—	○	○	○			

*1: The 1/1 octave filter is packaged together with the 1/1 real-time octave analysis optional software, while the 1/3 octave filter is packaged together with the 1/3 real-time octave analysis optional software.

● : Standard specification
○ : Option required

*2: A real-time octave analysis option (LA-0551 or LA-0552) and the comparator option are both required.

*3: The loudness value calculation function is packaged together with the 1/3 real-time octave analysis option (not available for the LA-2560 model).

• The brochures on LA-1210/1220/1240/1250/1350/4350 are also available. Please refer to them for more information.

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*Outer appearance and specifications are subject to change without prior notice.

URL: <http://www.onosokki.co.jp/English/english.htm>

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